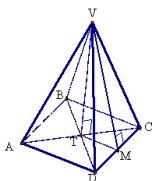


9.3 and 9.5

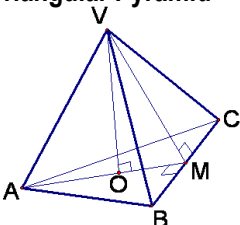
Area and Volume of Pyramids

The **base** of a pyramid is a polygon.
The **lateral faces** are triangles

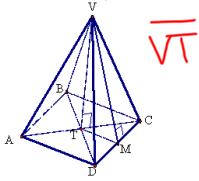
Square pyramid



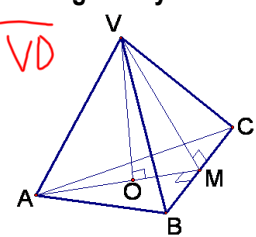
Triangular Pyramid



Square pyramid



Triangular Pyramid



The **height** of the pyramid is the perpendicular distance between the vertex and the base.

The **slant height** of the pyramid, represented by the letter l, is the height of one of the lateral faces (triangles). (Isosceles on a regular pyramid.)

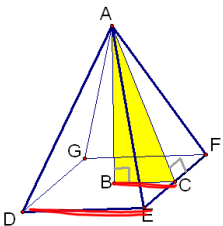
The **lateral edges** connect the main vertex and the vertices of the base.

VT

VM

AV, DV, CV, BV

- Please answer the following questions:
1. square What shape is the base?
 2. DA, GA, FA, EA Name the lateral edges.
 3. AB Name the height (altitude).
 4. Δs What shape are the lateral faces?
 5. ΔDAE, ΔAEF, ΔACD, ΔAFG Name all 4 lateral faces.
 6. l Name the slant height.
 7. DE, GD, GF, FE Name the base edges.
 8. Right What kind of triangle is $\triangle ABC$?
 9. $DE = \underline{2} \times BC$
 10. Fill in the Pythagorean Theorem for $\triangle ABC$. $AC^2 = \underline{AB^2} + \underline{BC^2}$



$$LA = \frac{1}{2} p l$$

$$SA = LA + B$$

$$V = \frac{1}{3} Bh$$

Example 1:

$$h = 12\text{cm}$$

$$l = 13\text{cm}$$

$$p = 40\text{cm}$$

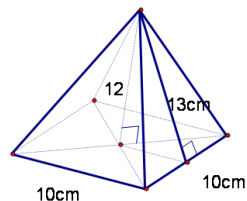
$$B = 100\text{cm}^2$$

$$LA = 260\text{cm}^2$$

$$SA = 360\text{cm}^2$$

$$V = 400\text{cm}^3$$

$$\frac{1}{3} 100 \cdot 12$$



$$\frac{1}{2} p l \quad \frac{1}{2} 40 \cdot 13$$

$$LA + B$$

Example 2:

$$h = 2\text{cm}$$

$$l = 2.5\text{cm}$$

$$p = 12\text{cm}$$

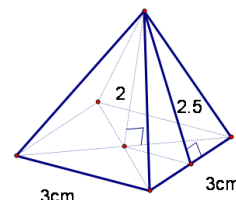
$$B = 9\text{cm}^2$$

$$LA = 15\text{cm}^2 \quad \frac{1}{2} 12 \cdot 2.5$$

$$SA = 24\text{cm}^2$$

$$V = 6\text{cm}^3$$

$$\frac{1}{3} 9 \cdot 2$$

**HW**

worksheet #s 1-4

Bring in magazine or
pictures of interest to
you